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PHARMACYCLICS ANNOUNCES PRECLINICAL DATA FURTHER SUPPORTING DEVELOPMENT OF ANTRIN® ANGIOPHOTOTHERAPY TO TREAT VULNERABLE PLAQUE
-- Announces Plans for Phase 2 Trial in Vulnerable Plaque --

New Orleans, LA. -- November 8, 2004 – Pharmacyclics, Inc. (Nasdaq: PCYC) today announced preclinical findings demonstrating that Antrin® (motexafin lutetium) angiophototherapy leads to regression and stabilization of vulnerable plaques in various animal models. The data were presented at the American Heart Association (AHA) Scientific Sessions 2004 being held here this week, in a presentation entitled, "Motexafin Lutetium Phototherapy with Low Fluences Promotes Plaque Regression and Stabilization."

According to the AHA, more than 1.2 million Americans suffer heart attacks each year and close to 42 percent of these patients die. It's estimated that up to 80 percent of heart attacks are caused by vulnerable plaques, inflammatory lesions within the coronary artery wall that cause blood clots when they rupture. Recent scientific evidence has shown that vulnerable plaque diffusely affects the coronary arteries, limiting the applicability of focal treatments such as balloon angioplasty and stents.

"Because Antrin angiophototherapy is a selective regional treatment that can be performed in long segments of a diseased artery, it may be well suited to address the

vulnerable plaque problem," said Richard A. Miller, M.D., president and chief executive officer of Pharmacyclics. "The findings in this preclinical study together with data from our recently reported Phase 1 trial of Antrin angiophototherapy in the treatment of coronary artery disease, provide the basis for a Phase 2 trial evaluating Antrin angiophototherapy for the treatment of vulnerable plaque. This Phase 2 trial is anticipated to begin in mid-2005."

In the study presented at AHA, Antrin was intravenously injected into animal models with high cholesterol levels and aggressive atherosclerosis. After accumulating in the vascular lesions, Antrin was activated by light delivered with an optical fiber into the diseased vessel. Long segments of diseased and normal vessel were illuminated.

Tissue samples taken after treatment demonstrated a reduction in the numbers of vascular macrophages, which are immune system cells that play a crucial role in the inflammatory process underlying the formation of vulnerable plaques. No damage to normal regions of the blood vessels was observed. The studies also demonstrated that remodeling of the vessels, or healing, of the atherosclerosis had occurred.

These results are consistent with findings from a Phase 1 clinical trial of Antrin angiophototherapy in the treatment of coronary artery disease. Data from that Phase 1 trial were recently presented at the Cardiovascular Research Foundation's 16th Annual Scientific Meeting of Transcatheter Cardiovascular Therapeutics held in Washington, D.C. The data, taken from intravascular ultrasound (IVUS) imaging studies, indicate that Antrin prevented plaque build-up following balloon angioplasty and stent placement in patients receiving optimum doses of drug and light therapy.

About Atherosclerosis and Vulnerable Plaque

Atherosclerosis is a major cause of morbidity and death. The disease occurs through build-up of cholesterol and abnormal tissue within blood vessel walls, which often leads to life-threatening blockages of blood vessels to the heart and brain. Coronary atherosclerosis is often treated with balloon angioplasty and stents, which are techniques that mechanically enlarge and maintain the coronary lumen.

Although atherosclerosis has long been known to be associated with high levels of circulating cholesterol, inflammation has been shown to be an important factor in progression of atherosclerosis and in plaque rupture, the major cause of heart attacks. Inflammatory lesions in the walls of coronary arteries, known as vulnerable plaque, are prone to rupture causing acute thrombosis and obstruction of blood flow and heart attacks. It is now known that patients who suffer from unstable angina or heart attacks frequently have involvement of long segments of the coronary arteries with inflammation and lipid deposition. Balloon angioplasty and stents are designed to treat focal areas of disease and, therefore, have limited applicability to vulnerable plaque therapy.

About Antrin

Antrin is injected into the bloodstream, where it is designed to selectively accumulate in sites of plaque throughout the body. Diseased areas are then exposed to far-red light, which is delivered by an optical fiber inserted into the vessel using standard interventional cardiology techniques. When activated by the light, Antrin generates a chemical reaction that may selectively eliminate macrophages, causing stabilization or reduction of vulnerable plaque. Phase 1 and Phase 2 testing with Antrin angiophototherapy in peripheral arterial disease and Phase 1 testing in coronary artery disease have been completed. These trials indicated that intravenous administration of Antrin and the Antrin phototherapy procedure are well tolerated, with no serious adverse events seen in the over 200 patients enrolled in these studies.

About Pharmacyclics

Pharmacyclics is a pharmaceutical company developing innovative products to treat cancer and atherosclerosis. The company's products are rationally designed, ring-shaped small molecules called texaphyrins that are designed to selectively target and disrupt the bioenergetic processes of diseased cells, such as cancer and atherosclerotic plaque. More information about the company, its technology, and products in development can be found on its website at www.pcyc.com. Pharmacyclics®, Antrin® and the "pentadentate" logo® are registered trademarks of Pharmacyclics, Inc.

NOTE: Other than statements of historical fact, the statements made in this press release about the commencement of and enrollment plans for our clinical trials, progress of and reports of results from preclinical and clinical studies, clinical development plans and product development activities are forward-looking statements, as defined in the Private Securities Litigation Reform Act of 1995. The words "believe," "will," "continue," "plan," "expect," "intend," "anticipate," variations of such words, and similar expressions also identify forward-looking statements, but their absence does not mean that the statement is not forward-looking. The forward-looking statements are not guarantees of future performance and are subject to risks and uncertainties that may cause actual results to differ materially from those in the forward-looking statements. Factors that could affect actual results include risks associated with the initiation, timing, design, enrollment and cost of clinical trials; the fact that data from preclinical studies and Phase 1 and 2 clinical trials may not necessarily be indicative of future clinical trial results; the company's ability to establish successful partnerships and collaborations with third parties; the regulatory approval process in the United States and other countries; and future capital requirements. For further information about these risks and other factors that may affect the actual results achieved by Pharmacyclics, please see the company's reports as filed with the U.S. Securities and Exchange Commission from time to time, including but not limited to its quarterly report on Form 10-Q for the period ended September 30, 2004. Forward-looking statements contained in this announcement are made as of this date, and we undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise.

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